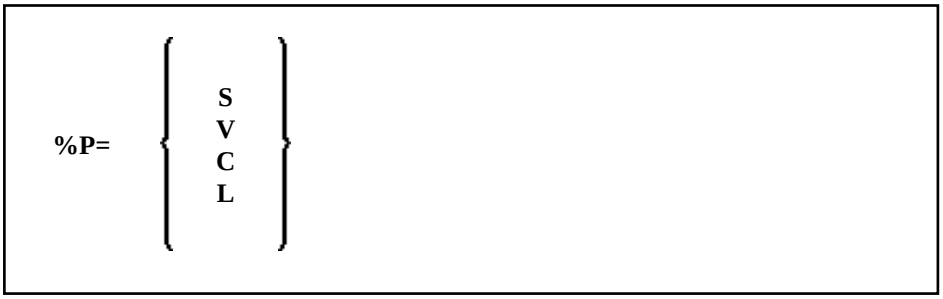
%P= - CALL Options

Note:
The following commands are for Mainframes only.

Command Syntax



The commands %P=S, %P=V and %P=C may be used to set special options which apply when a Natural program calls a non-Natural program (via a CALL statement) under CICS. In all other environments, these commands are ignored.

For details on calling non-Natural programs, see the CALL statement in the Natural Statements documentation.

Each %P= command applies only to the next call.

The following command options are covered below:

- %P=S - Standard Linkage for Call
- %P=V - Roll-Out for Call
- %P=C - Pass Parameter Values instead of Address
- %P=L - Call of LE/370 Dynamic Main Program

%P=S - Standard Linkage for Call

Note:
This command only applies under CICS.

Normally, when a Natural program calls a non-Natural program under CICS, the call is accomplished by an "EXEC CICS LINK" request.

If standard linkage is to be used for the call instead, issue the terminal command %P=S. In this case, the called program must adhere to standard linkage conventions with standard register usage.

%P=V - Roll-Out for Call

Note:
This command only applies under CICS.

Normally, when a Natural programs calls a non-Natural program and the called program issues a conversational terminal I/O, the Natural thread is blocked until the user has entered data.

Under CICS, %P=V can be used to prevent the Natural thread from being blocked: if this terminal command is specified, the parameter data passed from the Natural program to the called program are copied out of the Natural thread, and the thread is rolled out before the call. The thread is then available for another user. Upon return from the called program to the calling Natural program, the thread is rolled back in again, the (modified) data area is copied into the thread, and Natural processing continues.

Note:
Only the parameters specified in the CALL statement are copied out of and back into the thread.

%P=C - Pass Parameter Values instead of Address

Note:
This command only applies under CICS.

Normally, when a Natural program calls a non-Natural program under CICS, the address of the CALL parameter address list is passed in the COMMAREA. If you wish the parameter values themselves, rather than the address of their address list, to be passed in the COMMAREA, issue the terminal command %P=C before the call.

This makes it possible, for example, to use DPL for called CICS programs: A CICS program that resides in another CICS region can only be called with %P=C; as addresses within the "calling" region cannot be accessed by the "called" region, the parameter values have to be passed instead.

When %P=C is used, no parameters are passed in the TWA, but only parameter values in the CICS COMMAREA. All parameters of the CALL parameter list are copied adjacent to one another, regardless of their alignment. The resulting COMMAREA length is the sum of the individual parameter lengths (this has to be taken into consideration when determining the number of array occurrences to be passed). On return from the called program, the parameters are copied back.

When overlapping fields are passed or the same field is passed more than once, these fields should be made "read-only" for the called program; otherwise, unpredictable results may occur when parameter values are returned to the calling program.

For %P=C, the restriction applies that group arrays cannot be passed:

```
01 #GROUP (2)    02 #FIELD1 (A1)    02 #FIELD2 (P7)
```

Either pass them as individual arrays:

```
01 #GROUP    02 #FIELD1 (A1/2)    02 #FIELD2 (P7/2)
```

Or redefine them:

```
01 #GROUP 01 REDEFINE #GROUP    02 #ARRAY (A1/10)
```

and specify the array name in the CALL statement.

Note:
If both %P=S and %P=C are issued for a call, %P=C will be ignored.

%P=L - Call of LE/370 Dynamic Main Program

Note:
This command only applies if the option for the support of the IBM Language Environment (LE/370) calling conventions has been set at the installation of Natural.

This command causes control to be returned to Natural after a call to an LE/370 dynamic main program.

By default, when an LE/370 dynamic main program is invoked, control is not returned to Natural after the invoked program has been processed. For control to be returned after that program has been processed, you have to use %P=L before invoking the program.

For information on the support of LE/370 calling conventions in the Natural Operations for Mainframes documentation.

